



MARYLAND FIRE AND RESCUE INSTITUTE • UNIVERSITY OF MARYLAND

Emergency Vehicle Operator

Lesson 4-1: Apparatus Inspection and Maintenance



Student Performance Objective

- After completing this lesson, the student shall be able to explain actions taken to appropriately conduct apparatus inspection and maintenance. In addition, students will be able to perform basic apparatus inspection and maintenance skills.

A faded background image of a fire truck, showing its side profile with various equipment and ladders visible. The truck is red and white.

Overview

- Systematic Maintenance Program
- Documentation, Reporting, and Follow-Up
- Vehicle Cleanliness

Systematic Maintenance Program

- Every department should develop SOPs for systematic apparatus maintenance.

Compliance with
NFPA® standards

Who?
What?
When?

Method for reporting,
correcting, and
documenting
activities

Systematic Maintenance Program

- Apparatus maintenance responsibilities will vary by jurisdiction.



Driver/operators
often fix minor
deficiencies



Certified
mechanics fix
more complex
problems

Systematic Maintenance Program

- Maintenance schedules vary by jurisdiction and differ based on staffing.



Maintenance
check at the
beginning of
each tour of duty



Weekly or
monthly detailed
inspection

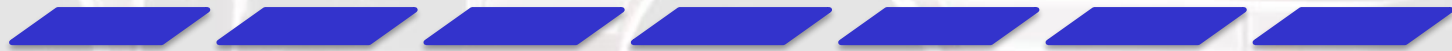




Documentation, Reporting, and Follow up

- Each jurisdiction should establish inspection and maintenance policies.

Procedure for documentation and communication



Standardized written forms or computer programs



Filing system for storage, retrieval, and review of records

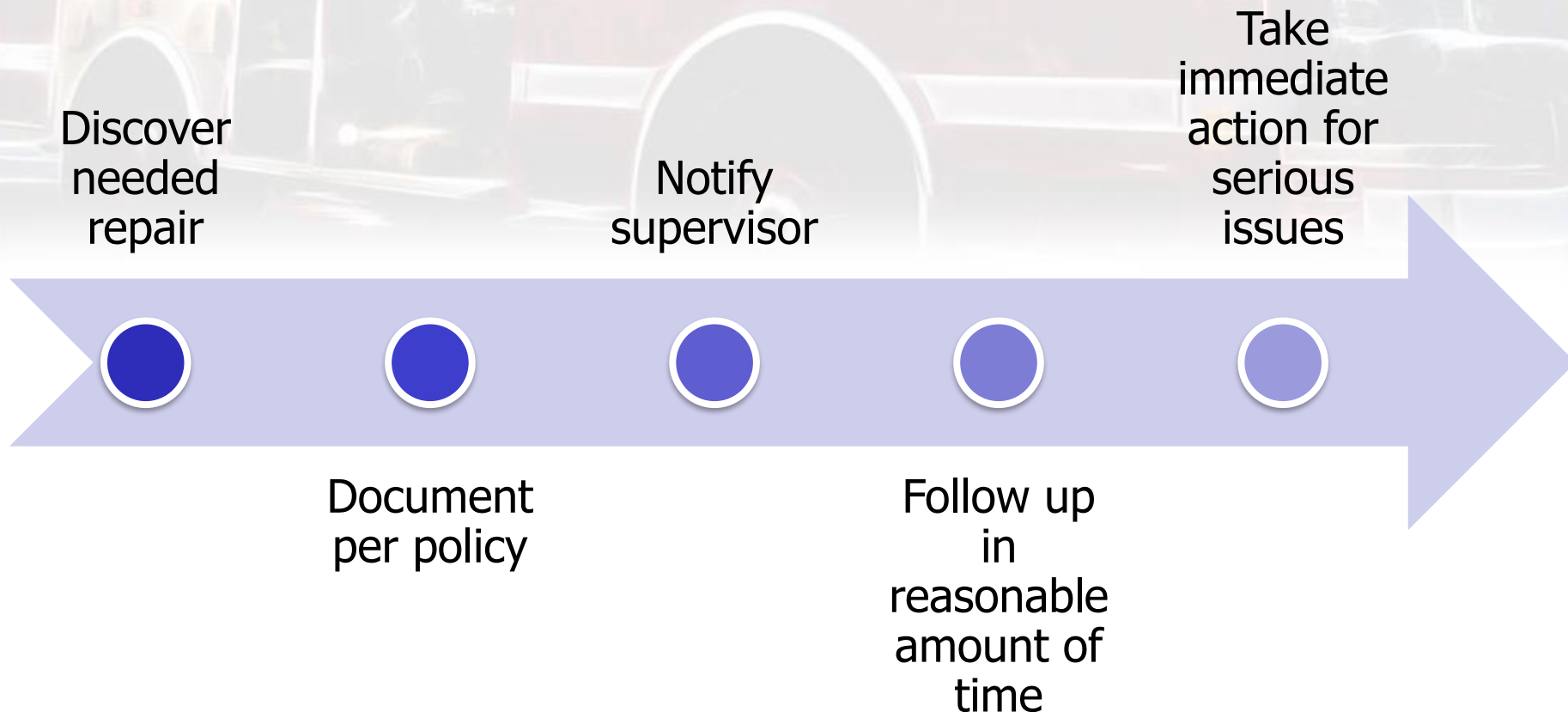


Inspection checklist for specific apparatus



Documentation, Reporting, and Follow up

- Driver/operators should follow established policy for documenting, reporting, and following up on repairs.



Documentation, Reporting, and Follow up

- Apparatus maintenance and inspection records serve several different functions.

Documentation for warranty claims

Evidence for accident investigators

Support for decisions to purchase or repair apparatus

Vehicle Cleanliness

- Cleanliness of apparatus and onboard equipment is an important part of any inspection and maintenance program.



Is easier to inspect

Clean
apparatus

Promotes longer
vehicle life

Vehicle Cleanliness

- Apparatus and equipment are easier to inspect if they are free of dirt and grime.



A clean engine permits proper inspection for leaks.

Diesel fuel leaves a gummy residue.

Linkages, fuel injectors, and other controls in the engine become inoperable due to the collection of dirt.

Mechanical defects are more obvious if the undercarriage is clean.

Components can be visualized more easily.

Vehicle Cleanliness

- NOTE:
 - While fuel injectors do not have external moving parts, they are still a source of collected dirt and oil. This area should be checked and cleaned.

Vehicle Cleanliness

- Over-cleaning the fire apparatus can have adverse effects.

Steam cleaning or high pressure washing

- Steam cleaning/high pressure washing may remove lubrication from chassis, engine, pump, and underbody

Wiring and connections

- Use caution when employing high pressure cleaning equipment near wiring and connections
- Perform routine lubrication on connections when necessary

Vehicle Cleanliness

- Driver/operators must ensure that the entire apparatus is clean and well maintained.



Washing



**Interior
cleaning**



Glass care



Waxing

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Review

- Systematic Maintenance Program
- Documentation, Reporting, and Follow-Up
- Vehicle Cleanliness